



# OIL ANALYSIS REPORT

Sample Rating Trend

**NORMAL**



Machine Id  
**MOOR R90453**

Component  
**Diesel Engine**

Fluid  
**PETRO CANADA DURON HP 15W40 (--- GAL)**

## DIAGNOSIS

### Recommendation

No corrective action is recommended at this time. Confirm the source of the lubricant being utilized for top-up/fill. Resample at the next service interval to monitor.

### Wear

Metal levels are typical for a components first oil change.

### Contamination

Fuel content negligible. Elevated aluminum (Al) and/or lead (Pb) and potassium (K) levels in your metals analysis are likely a result of solder flux release into the lubricant and is common on new equipment/components. There is no indication of any contamination in the oil.

### Fluid Condition

Additive levels indicate the addition of a different brand, or type of oil. Viscosity of sample indicates oil is within SAE 30 range, advise investigate. The condition of the oil is acceptable for the time in service.

## SAMPLE INFORMATION

	method	limit/base	current	history1	history2
Sample Number	Client Info		<b>GFL0096335</b>	---	---
Sample Date	Client Info		<b>03 Nov 2023</b>	---	---
Machine Age	hrs	Client Info	<b>568</b>	---	---
Oil Age	hrs	Client Info	<b>568</b>	---	---
Oil Changed	Client Info		<b>Changed</b>	---	---
Sample Status			<b>NORMAL</b>	---	---

## CONTAMINATION

	method	limit/base	current	history1	history2
Water	WC Method	>0.2	<b>NEG</b>	---	---
Glycol	WC Method		<b>NEG</b>	---	---

## WEAR METALS

	method	limit/base	current	history1	history2
Iron	ppm	ASTM D5185(m) >100	<b>35</b>	---	---
Chromium	ppm	ASTM D5185(m) >20	<b>&lt;1</b>	---	---
Nickel	ppm	ASTM D5185(m) >4	<b>5</b>	---	---
Titanium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Silver	ppm	ASTM D5185(m) >3	<b>&lt;1</b>	---	---
Aluminum	ppm	ASTM D5185(m) >20	<b>8</b>	---	---
Lead	ppm	ASTM D5185(m) >40	<b>4</b>	---	---
Copper	ppm	ASTM D5185(m) >330	<b>171</b>	---	---
Tin	ppm	ASTM D5185(m) >15	<b>2</b>	---	---
Antimony	ppm	ASTM D5185(m)	<b>0</b>	---	---
Vanadium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Beryllium	ppm	ASTM D5185(m)	<b>0</b>	---	---
Cadmium	ppm	ASTM D5185(m)	<b>0</b>	---	---

## ADDITIVES

	method	limit/base	current	history1	history2
Boron	ppm	ASTM D5185(m) 0	<b>182</b>	---	---
Barium	ppm	ASTM D5185(m) 0	<b>&lt;1</b>	---	---
Molybdenum	ppm	ASTM D5185(m) 60	<b>107</b>	---	---
Manganese	ppm	ASTM D5185(m) 0	<b>3</b>	---	---
Magnesium	ppm	ASTM D5185(m) 1010	<b>580</b>	---	---
Calcium	ppm	ASTM D5185(m) 1070	<b>1570</b>	---	---
Phosphorus	ppm	ASTM D5185(m) 1150	<b>637</b>	---	---
Zinc	ppm	ASTM D5185(m) 1270	<b>781</b>	---	---
Sulfur	ppm	ASTM D5185(m) 2060	<b>1889</b>	---	---
Lithium	ppm	ASTM D5185(m)	<b>&lt;1</b>	---	---

## CONTAMINANTS

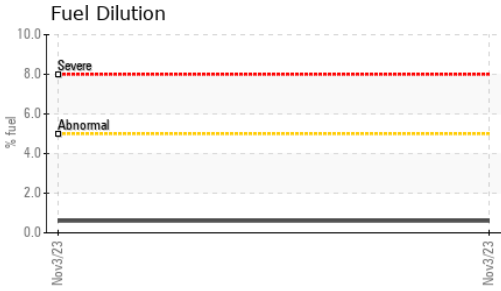
	method	limit/base	current	history1	history2
Silicon	ppm	ASTM D5185(m) >25	<b>57</b>	---	---
Sodium	ppm	ASTM D5185(m)	<b>4</b>	---	---
Potassium	ppm	ASTM D5185(m) >20	<b>16</b>	---	---
Fuel	%	ASTM D7593* >5	<b>0.6</b>	---	---

## INFRA-RED

	method	limit/base	current	history1	history2
Soot %	%	ASTM D7844* >3	<b>0.3</b>	---	---
Nitration	Abs/cm	ASTM D7624* >20	<b>9.8</b>	---	---
Sulfation	Abs.1mm	ASTM D7415* >30	<b>24.1</b>	---	---



# OIL ANALYSIS REPORT



### FLUID DEGRADATION

method	limit/base	current	history1	history2
Oxidation	Abs./1mm ASTM D7414*	>25	21.8	---

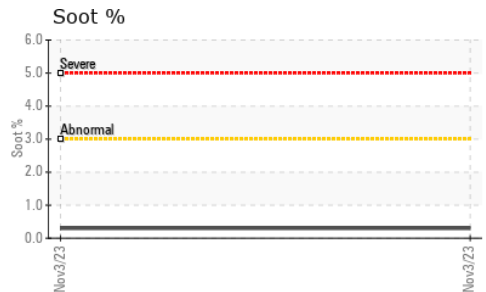
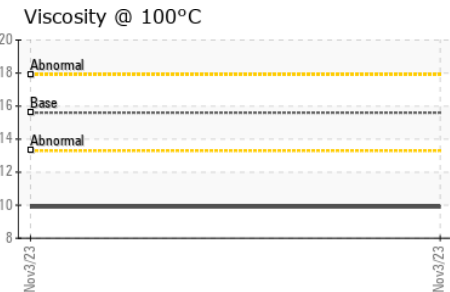
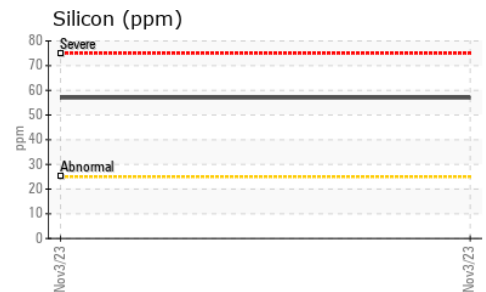
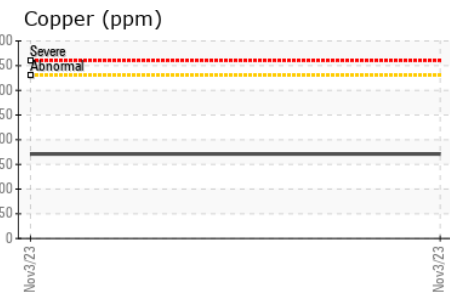
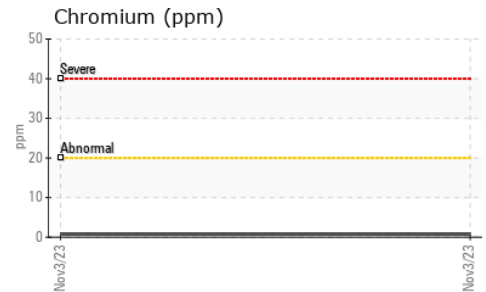
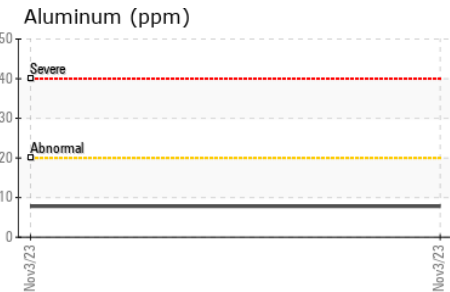
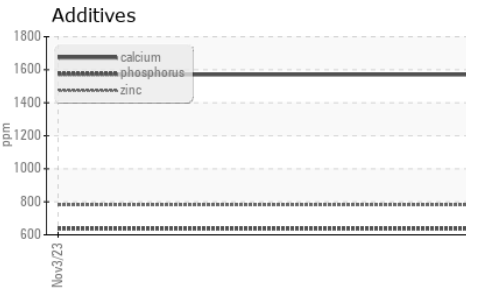
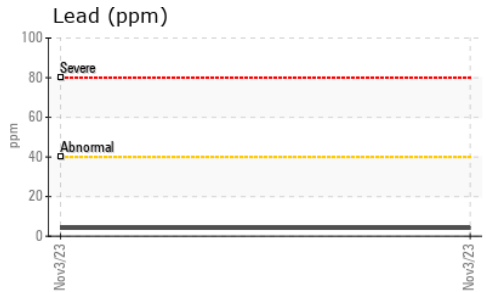
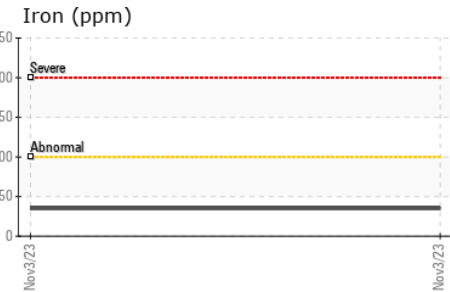
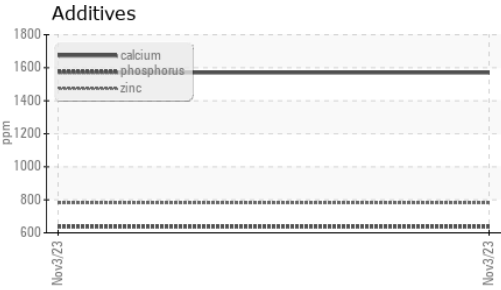
### VISUAL

method	limit/base	current	history1	history2
Emulsified Water	scalar Visual*	>0.2	NEG	---
Free Water	scalar Visual*		NEG	---

### FLUID PROPERTIES

method	limit/base	current	history1	history2
Visc @ 100°C	cSt ASTM D7279(m)	15.6	9.9	---

### GRAPHS



ISO 17025:2017  
Accredited  
Laboratory

Laboratory : WearCheck - C8-1175 Appleby Line, Burlington, ON L7L 5H9  
 Sample No. : GFL0096335 Received : 13 Dec 2023  
 Lab Number : 02602764 Diagnosed : 14 Dec 2023  
 Unique Number : 5695849 Diagnostician : Kevin Marson  
 Test Package : MOB 1 ( Additional Tests: FuelDilution, PercentFuel )

To discuss this sample report, contact Customer Service at 1-800-268-2131.  
 Test denoted (\*) outside scope of accreditation, (m) method modified, (e) tested at external lab.  
 Validity of results and interpretation are based on the sample and information as supplied.

**GFL Environmental - 527**  
 740 Pine Street South  
 Timmins, ON  
 CA P4N 8S9  
 Contact: Martin St-Pierre  
 martinstpierre@gflenv.com  
 T: (705)264-8700  
 F: (705)264-8701